DOCUMENT RESUME

ED 199 958 EC 132 448

AUTHOR Swartz, Stanley L.; Benjamin, Candice
TITLE Childhood Depression and Hyperactivity.
PUB DATE 80
NOTE 23p.; Paper presented at the Annual Conference on Severe Behavior Disorders of Children and Youth (4th, November, 1980).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Aggression; *Attention; Children; *Depression (Psychology); *Emotional Disturbances; Exceptional Child Research; *Hyperactivity

ABSTRACT

The paper reviews the research literature and reports a study designed to investigate the relationship between hyperactivity, the related disorders of aggressivity and inattentiveness, and childhood depression in a sample of 18 severely emotionally disturbed boys (5 to 13 years old) served by a residential school and treatment center. Results indicated that there is a positive correlation between hyperactivity and depression. That such a relationship exists is seen to suggest a greater complexity for the professional in dealing with hyperactive and depressive states that may be exhibited in severely disturbed children. Implications for educational programing and therapy are discussed. (Author)

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Childhood Depression and Hyperactivity

Stanley L. Swartz

and

Candice Benjamin

Fourth Annual Conference on Severe Behavior Disorders of Children and Youth

Arizona State University

November 1980

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Abstract

This paper reviews the research literature and reports a study designed to investigate the relationship between hyperactivity, the related disorders of aggressivity and inattentiveness, and childhood depression. The sample for this study included eighteen severely emotionally disturbed boys served by a residential school and treatment center. Results indicated that there is a positive correlation between hyperactivity and depression. That such a relationship exists, suggests a greater complexity for the professional in dealing with hyperactive and depressive states that may be exhibited in severely disturbed children. Implications for educational programming and therapy are discussed.

Childhood Depression and Hyperactivity

The relationship between depression and hyperactivity represents itself as a paradox that is manifested in the child in a variety of disturbing and disconcerting guises. That such a relationship exists, implies that diagnosis and treatment for depressed and/or hyperactive children may be currently misdirected. The literature reviewed examines some basic concepts of depression and hyperactivity as they exist independently and together.

Depression

Until recently, the study of childhood depression had been neglected and many professionals did not consider depression to exist in children. With an increased interest in, and a recognition of childhood depression, many experts in the field established varying criteria and classifications representative of depression. Symptoms of adult depression have provided an inconsistent basis for diagnosing childhood depression. Depression can represent itself quite differently in the adult and child (Brumback and Weinberg, 1977; Welner, 1978).

Anthony (1967) felt that the difference between adult and childhood depression was "the inability of the child to verbalize his affective state, to the incomplete development of the superego, and to the absence of consistent self-representation" (p. 1403). He stated that the picture of prepubertal depression includes, among other symptoms; "weeping bouts, some flatness of affect, fear of death for self and parents, irritability, somatic complaints, loss of appetite and energy, varying degrees of difficulty in school adjustment, and vacillation between clinging to and unreasonable hostility toward. . . parents" (p. 1404).

Drawing from a variety of sources, Malmquist (1977) conceptualized how a depressed child would appear.

1. A general picture of a sad, depressed, or unhappy looking child may be present. The child does not complain of unhappiness, or even exhibit awareness of it, but rather conveys a psychomotor behavioral picture of sadness.

2. Withdrawal and inhibition with little interest in any activity may be most prominent. Listlessness gives an impression of boredom or physical illness and often leads an observer to conclude that the child must have some concealed physical illness.

3. Somatizing takes the form of physical pain (headaches, abdominal complaints, dizziness), insomnia, sleeping or eating disturbances -- "depressive equivalents."

4. A quality of discontent is prominent. An initial impression is that the child is dissatisfied and experiences little pleasure, and in time the clinician gathers the added impression that others -- even an examiner who has barely met the child -- are somehow responsible for his plight. In some cases blame is cast on others in the sense of easily criticizing other children.

5. A sense of feeling rejected or unloved is present. There is a readiness to turn away from disappointing objects.

6. Negative self-concepts reflect cognitive patterns of illogically concluding that they are worthless, etc. (Beck, 1972).

7. Reports are made of observations of low frustration tolerance and irritability; this is coupled with self-punitive behavior when goals are not attained.

8. Although the child conveys a sense of needing or wanting comfort, reassurance is then accepted as his due, or he remains dissatisfied and discontent although he is often ignorant as to why.

9. Reversal of affect is revealed in clowning and dealing with underlying depressive feelings by foolish or provocative behavior to detract from assets or achievements.

10. Blatant attempts to deny feelings of helplessness and hopelessness are seen in the Charlie Brown syndrome, modeled after the cartoon character of a boy from 7 to 9 years who avoids confronting his despair and disillusionment by being self-deprecatory and then springing back with hope (Symonds, 1968). These actions indicate a hope that self-depreciations, avoidance of rewards, dedicated effort, and other examples of being "good" will lead to rewards that are just--perhaps when one grows up or at least in the hereafter. Hope enables children to avoid the more overt manifestations of depressive pessimism seen in the adult when disillusionment occurs.

11. Provocative behavior stirs angry responses in others and leads others to use the child as a focus for their own disappointments. Such scapegoating indicates suffering, which leads to descriptions of the child as a "born loser." Difficulties in handling aggression may be a frequent reason for referral.

12. The children exhibit tendencies to passivity and expect others to anticipate their needs. Since this is frequently impossible, they may express their anger by passive-aggressive techniques.

13. Sensitivity and high standards with a readiness to condemn themselves for failures are common. There is a preference to be harsh and self-critical. This appears as an attempt to avoid conflict associated with hostility by in effect saying, "I don't blame you--only myself." In some this extends to the point of feeling they are so bad they should be dead (McConville, Boag, and Purokit, 1973).

14. Obsessive compulsive behavior is seen in connection with other types of regressive, magical activities.

15. Episodic acting-out behaviors are used as a defensive maneuver to avoid experiencing painful feelings associated with depression. (pp. 50-51).

Weinberg, Rutman, Sullivan, Penick, and Dietz (1973) established a classification of depression for children referred to an educational diagnostic center. Children were diagnosed as depressed if they exhibited dysphoric mood, self-deprecatory ideations and two or more of the following eight symptoms: 1) aggressive behavior (agitation), 2) sleep disturbance, 3) a change in school performance, 4) diminished socialization, 5) change in attitude toward school, 6) somatic complaints, 7) loss of usual energy and 8) unusual change in appetite and/or weight. These symptoms had to strike a marked difference from the child's usual behavior and be present for at least one month (pp. 1066-1067). Using their criteria 72 new patients referred over a three-month period to a diagnostic center were studied. Children were referred by classroom teachers and school principals who described

their behavior as hyperactive, aggressive, acting-out, or shy. Thirty-five of the children referred were found to be actively depressed, and seven were in remission.

McConville, Boag, and Purokit (1973) described three types of childhood depression: (1) The affectual depression group characterized by a display of sadness, helplessness, and occasionally, hopelessness, (2) the negative self-esteem group in which feelings of being worthless, unloved, and being used by other people were predominant, and (3) the guilt depression group who feel that they are innately bad and should be dead or killed. Using these classifications, 75 children between the ages of 6 and 13 who resided in a treatment unit were studied. The authors hypothesized that affectual depressive responses decrease with age while depressive self-esteem and guilt increase with age.

Frommer (1968) studied 73 children who were suffering from a neurotic disorder in comparison to a group of 190 depressed children, in an attempt to establish the distinguishing features of juvenile depressive illness. Frommer identified three types of "clinical patterns."

1. The enuretic and/or encopretic depressives: characterized by moodiness, weepiness, immaturity, and hostile and antisocial behavior.

2. Children with uncomplicated depression: "tendency to recurrent explosions of temper," irritability, weepiness, and sleep disturbances.

3. Children with a depressive phobic anxiety state: demonstrate the "weepiness, tension, and irritability" but are "less moody and more apathetic." (pp. 119-121)

Hyperactivity

A review of hyperactivity presents a consistent picture of a relatively inconsistent child. Werry (1968) defined hyperactivity or hyperkinesis as "total daily motor activity (or movement of the body or any portion of it) which is significantly greater than the norm" (p. 581). Kinsbourne (1978) has indicated that three areas of a child's behavior must be addressed to make an accurate diagnosis of hyperactivity, they are: movement, attention, and social interaction. The author stated that not all three of these behaviors are equally important at every age.

> The abnormal movement, attention, and social interaction is most prominent in infancy and less important as the child grows older. The problem of paying attention is least important in early childhood, very important during school age. The social problem becomes increasingly important as the child grows up. Anyone who does not look at the social side may be deluded into thinking that a hyperactive child has recovered just because he is no longer moving excessively (p. 9).

Kenny, Clemmens, Hudson, Lentz, Cicci, and Nair (1971) completed an investigation to define the characteristics of children referred to an interdisciplinary diagnostic and evaluation clinic because of hyperactivity. Kenny et al. (1971) did not postulate any specific characteristics from their study and concluded that "it was apparent that a given child who might be excessively active and difficult to manage in a classroom setting could demonstrate levels of motor activity which were not inappropriate in a one-to-one situation or in a different environment." (p. 621)

A characteristic of the hyperactive child is his inability to socialize successfully with his peers. Ross and Ross (1976) explained this inability as the hyperactive child's attempt to structure his environment

by trying to rule his peers and by displaying immature behavior. The immature behavior may take the form of touching; indeed, the hyperactive child is still relying on tactual cues when he enters school, rather than on the visual and auditory cues used by his peers.

The hyperactive child has many negative feelings about himself. Because he is awkward and has a short attention span he cannot keep pace with his peers in many activities (Ross and Ross, 1976). Stewart and Olds (1973) have described the hyperactive child as "likely to have few friends, since the other children become disgusted with his constant poking and hitting and his silly show-off behavior" (p. 8).

While at school, the hyperactive child has problems remaining in one spot, not talking, completing his assignments, and curbing his impulses (Ross and Ross, 1976; Werry, 1968). Werry (1968) presents a clinical picture with associated symptoms of the hyperactive child that include defects of attention, excitability, learning disorders, neurologic concomitants and behavior difficulties that manifest themselves in anti-social behavior (pp. 584-585).

Depression, Mania, and Depressive Equivalents

Hyperactivity may take the form of mania in childhood. Brumback and Weinberg (1977b) noted that "follow-up studies of hyperactive children should consider whether or not the hyperactivity is primary or secondary to an affective illness such as depression, and that "hyperactivity can be a symptom of the other type of affective illness, childhood mania" (p. 250).

Noting the reluctance of earlier professionals to focus attention on manic-depression in children, Campbell said, "It is unfortunate that the reported cases of manic-depressive psychosis in children are presented as

if they were unique or unusual, because when the criteria for this entity were established, the present writer collected eighteen cases from his own practice within a four year period" (1952, p. 425). The classic definition of manic-depressive disease has been described as having a mean age onset of 32 years, and Kroeplin stated "that 0.4% of his manic-depressive patients had manic episodes before the age of ten" (Weinberg and Brumback, 1976, p. 380). Harms (1951) felt that signs of manic-depressive behavior were exhibited in the nursery. He concluded that the serious baby, the negativistic pre-schooler and the primary disorders of pre-adolescents, could be classified as manic utterances.

In 1951 Creak wrote a letter to Nervous Child in which she stated that she would only make use of the "term 'manic-depressive' when referring to symptoms affecting the child at every level or manifesting a degree of intensity that warranted the prefix 'psychotic'" (p. 317). She also felt that there was an internal conflict going on in the child, using manic behavior to fight off feelings of depression. Feinstein and Walpert (1973) concluded that a manic-depressive state could show itself in childhood through behavior disorders; occasionally, a full-blown case of manic-depression could manifest itself in adolescence.

Davis (1979) reported on a "manic-depressive variant syndrome of childhood" that involves children between the ages of 6 and 16. This syndrome does not involve manic or depressive episodes, "but rather a variant of the manic or depressive symptomatology typical of adult life" (p. 702). Davis continued by listing criteria that delineates this illness that includes a loss of emotional control, hyperactivity and

relationships that are invariably seriously troubled because of their erratic, explosive or unpredictable behavior.

Frequently, depression in children takes the form of aggressive, acting-out behavior. Kaufman, Makkay, and Tilbach (1959) studied adolescent girls who experienced delinquent character formation. They found that these girls had suffered the trauma of losing a parent or love object, (usually inflicted by the parent on the child) at an early age. The girls did not immediately display the characteristic symptoms of depression but because of the potential for such a manifestation were described as having a "depressive nucleus." The girls coped with this "depressive nucleus" by acting-out in socially inacceptable ways; promiscuity, stealing and running away from home (p. 133).

Kauffman and Helms (1956) also talked about the trauma of physically or psychologically losing a love object in relationship to juvenile delinquents. Once again the depressive nucleus is cited as manifesting itself in a behavior disorder. "The delinquent child. . . has a traumatized ego and a faulty superego, which then organizes the instinctual forces in this delinquent way in an active fight against the overwhelming depression" (pp. 148-149).

Referring to the love-object-loss, Malmquist (1971) noted that the child begins to devalue himself when such a loss occurs. The child may begin to become aggressive and direct his anger toward himself. He begins to see himself as worthless and further symptoms develop. Accompanying manifestations include motor restlessness, sleep disturbances and other somatic complaints.

In painting a picture of the depressed child, Malmquist (1971) included "episodic acting-out behavior that is adopted as a defensive maneuver to avoid experiencing painful feelings associated with depression" (p. 956). Malmquist stated that acting-out behavior in the depressed adolescent is common, "the adolescent may attack the external world while seeking an escape from the other. Acting-out may function as a defense against the effects of despair and helplessness" (p. 959).

Lesse (1974) suggested that delinquent behavior in adolescents may be masked depression. He noted that "fifty percent of the adolescents referred by police-juvenile officers manifested depressive reactions" (pp. 355-356). Depression, if coped with by antisocial behavior and gang relationships, may develop in an attempt to add meaning to life.

Brumback and Weinberg (1977) described the agitated, depressed child as having few friends, quarrelsome, and uncooperative. Because of his behavior, he is unable to function appropriately in school which perpetuates the negative feelings he has about himself.

Masked depression is a phenomena that is slowly gaining recognition. Children and adults display numerous complaints and acting-out behaviors that are, in actuality, a facade for the underlying depression. Lesse (1977) called attention to the various types of behavior that a depressed person might engage in: "antisocial acts, impulsive sexual behavior, temper outbursts, destructiveness, gambling, compulsive work habits, and accident proneness" (pp. 68-69). Gittelman-Klein (1977) also suggested the presence of "masked depressions" or "depressive equivalents" that surface as "aggression, hyperactivity, enuresis, sleeping and eating disturbances, and somatic complaints" (p. 71).

Gould (1965) described childhood depression as being much more common than the literature had suggested. Gould felt that depression took many unobvious forms in the child such as "temper tantrums, boredom, restlessness, rebelliousness, hypochondriacal preoccupation, 'accidental' injuries, running away and delinquent and antisocial acts" (p. 235). Hollon (1970) contended that depression often masks itself in the form of poor school performance, and that children are often mislabeled as behavior problems because of the underlying depression.

Burks and Harrison (1960) studied aggressive, acting-out children who lived at home and in a residential setting. The authors felt that many of the children studied displayed an aggressive core used to avoid a depressive state. Many of these children had encountered early deprivation and lived with the feelings of helplessness and worthlessness.

Depression and Hyperactivity

Some professionals have linked depression to hyperactivity and have noted a definite relationship. Brumback and Weinberg (1977) studied such a link as a common disturbing phenomena in children. Two hundred and twenty-three children were involved in the study and were evaluated for incidence of depression. The children were also evaluated for hyperactivity according to the following symptoms: "(1) excessive non-productive activity; (2) short attention span; (3) distractability; (4) impulsivity; and (5) accident proneness" (p. 248). The results from this study indicated that 136 (63%) of the depressed children were hyperactive. Brumback and Weinberg concluded that depression and hyperactivity can occur simultaneously, and that its incidence is associated, many times, with episodic hyperactivity, present only during a depressive state.

Welner (1978) conducted a study in which he found that the hyperactive child had "significantly more depressive symptoms than the normal control group" (p. 591). Cytryn and McKnew (1972) reviewed the cases of a group of children that had been referred to a treatment center for depression. The authors described a type of depression that they felt existed in childhood: "masked depressive reaction" (pp. 150-151) that was often characterized by hyperactivity, aggressive behavior, poor scholastic performance and marginal social adjustment.

Hyperactivity may also be a symptom of mania which is much rarer than depression. "The manic child is inappropriately euphoric, smiling, and denying that there are any problems even though his agitation and restlessness are overtly apparent to others. Distractability, hyperactivity, and a lack of a need for sleep are common features of mania. Additionally, push of speech and flight of ideas are a less frequent but still common part of the manic syndrome in children" (Brumback and Weinberg, 1977, p. 914).

Phillips (1979) stated that there are a variety of symptoms manifested from depression. In relationship to neglect from parents, many children regress and anxiety, hyperactivity, learning problems and somatic complaints occur.

In 1974, Ament felt that few hyperactive children did not suffer from emotional problems. Many reports describe the hyperactive child as sad, unhappy, or depressed. Loss of a significant person in the child's early life creates a poor self-image in the child. Zrull, McDermott, and Pozanski (1970) noted that hyperactivity manifests itself in infancy as the child learns to cope with maternal rejection. The child's feelings of worthlessness are compounded when he enters school and he is unable to adjust appropriately.

Malmquist (1971) talked about the odd pairing of hyperactivity and depression as a unique but evident phenomena.

> As with any one symptom, hyperkinesis is seen in a variety of disturbances varying from cerebral dysfunction to reactive behavior disorders. Hyperkinetic behavior is the depressive context may be an equivalent of hypomanic activity seen in adults who are attempting to ward off depressive feelings. Rebellious behavior can reflect maladaptive mechanisms in a child who repeats a situation of provocative and parental-rejecting behavior with others. Hyperactive behavior, like antisocial behavior, brings parental condemnation and allows the parent to focus on such behavior while ignoring long-standing hostilities. An increasing amount of clinical work confirms a point of view that certain forms of acting-out in children are a response to a depressive core. (p. 957)

Zrull et al. (1970) hypothesized that hyperactive children show a strong link to a depressive state. Closer scrutiny of children who have hyperkinetic syndrome based on a variety of etiologies gives some evidence for a linkage between depression and the hyperkinetic syndrome in some cases. It is important to find both descriptive evidence of the depressive disorder in the child, as well as the psychological dynamics, to substantiate the depression (p. 35). Parallels can be drawn between the agitated state of depression seen in the adult and the hyperkinetic syndrome seen in the child. "Distractability and poor concentration have many similarities; irritability and emotional instability are, likewise, quite similar. If impulsivity is the mode by which the child turns aggression outward, conversely depression can be seen as an expression of aggression turned inward. Impulsivity is more the style that the child uses in handling aggression" (p. 38).

The literature reviewed suggests that there may be a relationship between depression and hyperactivity. Research indicates there is no universally accepted definition for depression in childhood; consequently,

manic-depressive psychosis in children is hardly recognized. Yet, there have been a few studies completed that identified a depressive core in children and a mania that might be equated with hyperactivity.

Hyperactivity can occur in the child as a means of warding off a depressive state. Depression may manifest itself in many forms but correlates well with hyperactivity in relationship to the adult manic-depressive state. The child uses the manic state to induce hyperactivity, forcing the depression into the background. As the depression tries to resurface, the child continues to keep himself in the manic state.

Too often, this state forces the child to use socially unacceptable ways to cope with his difficulties. He becomes a problem in the classroom, is aggressive, inattentive, has poor peer relationships and is unable to follow directions. In adolescence, he may become delinquent, creating more depression and, consequently, more mania and hyperactivity.

The answer for this child is all too often medication. The medication, though, is prescribed to alleviate hyperactivity, when, in fact, hyperactivity can be symptomatic of depression. What professionals may be doing, by medicating many hyperactive children, is removing the mechanism they use to cope with their depression. Similarly behavior modification designed to eliminate hyperactivity could bring in its place depression which is more difficult to diagnose and address therapeutically.

Method

Subjects

Eighteen boys ranging in age from 5 to 13 years served by a residential school and treatment program participated in the study. All subjects were diagnosed as severely emotionally disturbed and though the diagnoses and nomenclature varied each was reported to manifest some level of hyperactive behavior.

Procedure

Hyperactivity was measured using the Conners' Teacher Rating Scale (Conners, 1969). The scale rated five factors: aggressivity, inattentiveness, anxiety, hyperactivity, and sociability. Anxiety, which was measured on the scale, was not used in the study because it is not generally considered to be closely related to hyperactivity. Sociability, which was also measured on the scale, was not used because girls were not included in the study. Additionally hyperactivity was confirmed using the criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM III, 1980).

Depression was measured by having each child respond to the Children's Depression Inventory (Kovacs, 1980). The child was encouraged to select the response that best described his feelings in the past two weeks. The children were interviewed by persons well known to them so that they could be encouraged to respond honestly.

Results

Results of the study are summarized in Table 1, which shows mean ratings of hyperactivity, aggressivity, inattentiveness and childhood depression.

Table 1

Correlation of Hyperactivity, Aggressivity, Inattentiveness and Childhood Depression

Factor	Mean	Standard Deviation	Pearson r
Hyperactivity	2.5472	0.07111	.489*
Aggressivity	2.4344	0.6764	.220
Inattentiveness	2.0928	0.5295	.175
Childhood Depression	12.0556	6.3752	

*significant $p < .01$

Each of the factors was tested separately using the Pearson product moment coefficient as a measure of statistical difference. Aggressivity and inattentiveness were found to occur independently of childhood depression. A correlation between hyperactivity and childhood depression was established at the .01 level of confidence.

Discussion

Results of the study demonstrate that hyperactivity and depression are positively correlated. The manifested behaviors of hyperactivity are more readily observable than those associated with childhood depression. The results of this study suggest that hyperactivity can be used as a positive indicator of the more difficult to diagnose depressive state. Research summarized in the literature review suggests that the depressed child uses hyperactivity to avert a depressive state. This type of behavior takes the form of manic-depression found in adults and suggests that such a state exists in children. In light of the present research, critical attention needs to be given to the implementation of behavior modification programs

and mood-altering drugs prescribed for the hyperactive child. Modification of hyperactive behavior could result in an escalation of depression. The hyperactive state may serve the disturbed child as an appropriate adjustment to depression that could affect the child's emotional stability if extinguished.

The literature review indicates that the self-induced state of hyperactivity brought on by the child may take the form of depressive equivalents (Lesse, 1974). The depressive equivalents may be manifested as inattentiveness or through acts of aggression. These two variables were found to occur independently of depression in this study. It is possible that the inattentive and aggressive behaviors that are closely related to hyperactivity are behaviors that appear in subtle varieties when manifested in isolation.

Hyperactive behaviors are generally considered unacceptable in most environments. However, modification of hyperactive behavior could result in an equally undesirable change in a child's depressive state. It is clear that the stimulus seeking behavior characteristic of hyperactivity needs to be channeled in a way that is more socially acceptable without simultaneously escalating the child's depressive state.

Stanley L. Swartz, Ph.D., Assistant Professor of Special Education, Western Illinois University, Macomb, Illinois and Director, Bethany Home/ Residential School and Treatment Program, Moline, Illinois.

Candice Benjamin, Assistant Director, Bethany Home/Residential School and Treatment, Moline, Illinois.

BIBLIOGRAPHY

Ament, A. Treatment of hyperactive children (letter). Journal of the American Medical Association, 1974, 230, 372.

Anthony, E. J. Psychiatric disorders of childhood, II: Psychoneurotic, psychophysiological, and personality disorders. In A. M. Freedman & H. I. Kaplan (Eds.), Comprehensive book of psychiatry. Baltimore: The Williams & Wilkins Company, 1967.

Beck, A. T. Measuring depression: The depression inventory. In T. A. Williams, M. M. Katz, and J. A. Shield (Eds.), Recent advances in psychobiology of the depressive illness. Washington, D.C.: U.S. Government Printing Office, 1972.

Brumback, R. A., & Weinberg, W. A. Childhood depression: An explanation of a behavior disorder of children. Perceptual and Motor Skills, 1977, 44, 911-916.

Brumback, R. A., & Weinberg, W. A. Relationship of hyperactivity and depression in children. Perceptual and Motor Skills, 1977b, 45, 247-251.

Burks, H. L., & Harrison, S. Aggressive behavior as a means of avoiding depression. American Journal of Orthopsychiatry, 1962, 32, 416-422.

Campbell, J. D. Manic-depressive psychosis in children. Journal of Nervous and Mental Disease, 1952, 116, 424-439.

Conners, K. C. A teacher rating scale for use in drug studies with children. American Journal of Psychiatry, 1969, 126, 152-156.

Creak, E. M. A letter. Nervous Child, 1952, 9, 317-318.

Cytryn, L., & McKnew, D. H., Jr. Proposed classifications of childhood depression. American Journal of Psychiatry, 1972, 129, 149-155.

Davis, R. E. Manic-depressive variant syndrome of childhood: A preliminary report. American Journal of Psychiatry, 1979, 136, 702-706.

Diagnostic and statistical manual of mental disorders, (3rd ed.). Washington, D.C.: American Psychiatric Association, 1980.

Feinstein, S. C., & Walpert, E. A. Juvenile manic-depressive illness: Clinical and therapeutic considerations. Journal of Child Psychiatry, 1973, 12, 123-136.

Frommer, E. A. Depressive illness in childhood. British Journal of Psychiatry, 1968, 2, 117-123.

Gittelman-Klein, R. Definitional and methodological issues concerning depressive illness in children. In J. G. Schulterbrandt and A. Raskin (Eds.), Depression in childhood: Diagnosis, treatment and conceptual models. New York: Raven Press, 1977.

Gould, R. E. Suicide problems in children and adolescents. American Journal of Psychotherapy, 1965, 19, 228-246.

Harms, E. Differential pattern of manic-depressive disease in childhood. Nervous Child, 1952, 9, 326-356.

Hollon, T. H. Poor school performance as a symptom of masked depression in children and adolescents. American Journal of Psychotherapy, 1970, 24, 258-263.

Kaufman, I., & Helms, L. The body image of the juvenile delinquent. American Journal of Orthopsychiatry, 1956, 28, 146-159.

Kaufman, I., Makkay, E. S., & Zibach, J. The impact on adolescent girls with delinquent character formation. American Journal of Orthopsychiatry, 1959, 29, 130-143.

Kenny, T. J., Clemmons, R. L., Hudson, B. W., Lentz, G. A., Jr., Cicci, R., & Nair, P. Characteristics of children referred because of hyperactivity. Journal of Pediatrics, 1971, 79, 618-622.

Kinsbourne, M. Hyperactivity diagnosis. Exceptional Parent, 1978, 8, 9-12.

Kovacs, Maria. Children's depression inventory. Unpublished: University of Pittsburgh, 1980.

Lesse, S. Depression masked by acting-out behavior patterns. American Journal of Psychotherapy, 1974, 28, 68-70.

Lesse, S. Masked depression and depressive equivalents. Psychopharmacology, 1977, 13, 68-70.

Malmquist, C. P. Depression in childhood and adolescence (first of two parts). New England Journal of Medicine, 1971, 284, 887-893.

Malmquist, C. P. Childhood depression: A clinical and behavioral perspective. In J. G. Schulterbrandt and A. Raskin (Eds.), Depression in childhood: Diagnosis, treatment and conceptual models. New York: Raven Press, 1977.

McConville, B. J., Boag, L. C., & Purokit, A. P. Three types of childhood depression. Canadian Psychiatric Association Journal, 1973, 18, 113-137.

Philips, I. Childhood depression: Interpersonal interactions and depressive phenomena. American Journal of Psychiatry, 1979, 136, 511-515.

Ross, D. M., & Ross, S. A. Hyperactivity. New York: John Wiley and Sons, Inc., 1976.

Schulterbrandt, J. G., & Raskin, A. (Eds.). Depression in childhood: Diagnosis, treatment and conceptual models. New York: Raven Press, 1977.

Stewart, M. A., & Olds, S. Raising a hyperactive child. New York: Harper & Row, 1973.

Symonds, M. The depressions in childhood and adolescence. American Journal of Psychoanalysis, 1968, 28, 189-195.

Weinberg, W. A., & Brumback, R. A. Mania in childhood: Case studies and literature review. The American Journal of Diseases of Children, 1976, 130, 380-385.

Weinberg, W. A., Rutman, J., Sullivan, L., Penick, E., & Dietz, S. Depression in children referred to an educational diagnostic center: Diagnosis and treatment. The Journal of Pediatrics, 1973, 83, 1065-1072.

Welner, Z. Childhood depression: An overview. The Journal of Nervous and Mental Disease, 1978, 166, 588-593.

Werry, J. S. Developmental hyperactivity. Pediatric Clinics of North America, 1968, 15, 581-599.

Williams, T. A., Katz, M. M., & Shield, J. A. (Eds.). Recent Advances in Psychobiology of the depressive illness. Washington, D.C.: U.S. Government Printing Office, 1972.

Zrull, J. P., McDermott, J. F., & Poznanski, E. Hyperkinetic syndrome: The role of depression. Child Psychiatry and Human Development, 1970, 1, 33-40.